

CLAIMS:

- 1) An optical transmission apparatus including a port for connection to an optical fiber for releasing non-visible laser light for transmission through the optical fiber,
5 said optical transmission apparatus including a visible light generator optically coupled to said port for releasing at said port a visible light tracer for propagation in the optical fiber with the non-visible laser light, wherein said visible light generator
10 modulates at least one aspect of the visible light tracer when at least one predetermined non-visible laser light transmission condition in the optical fiber is met.
- 2) An optical transmission apparatus as defined in claim
15 1, wherein said visible light generator modulates an intensity of the visible light tracer.
- 3) An optical transmission apparatus as defined in claim
1, wherein said visible light generator modulates a color
20 of the visible light tracer.
- 4) An optical transmission apparatus as defined in claim
1, wherein said predetermined non-visible laser light transmission condition is a transition from absence of
25 non-visible laser light in the optical fiber to presence of non-visible laser light in the optical fiber.
- 5) An optical transmission apparatus as defined in claim
1, wherein said predetermined non-visible laser light
30 transmission condition is a transition from a first power level of the non-visible laser light to a second power level of the non-visible laser light.
- 6) An optical transmission apparatus as in claim 1,
35 comprising a non-visible laser light generator for generating the non-visible laser light, said non-visible

laser light generator being optically coupled to said port.

- 7) An optical transmission apparatus as defined in claim
5 6, wherein said non-visible laser light generator is a Raman pump laser light generator.
- 8) An optical transmission apparatus as defined in claim
6, wherein said non-visible laser light generator is an
10 amplifier producing a non-visible signal laser light.
- 9) An optical transmission apparatus as defined in claim
1 wherein the visible light tracer carries a machine-
readable signal.
- 15 10) A laser light monitor, comprising:
- a) an input for receiving a control signal indicating the occurrence of at least one predetermined non-visible laser light transmission condition in an optical
20 fiber;
 - b) a visible light generator coupled to said input to modulate at least one aspect of a visible light tracer in response to the control signal;
 - c) a coupler including a first input coupled to said
25 visible light generator for receiving the visible light tracer and a second input coupled to the optical fiber for receiving the non-visible laser light, said coupler further including an output, said coupler being operative to combine the visual light tracer and
30 the non-visible laser light into a combined radiation stream and release the combined radiation stream at said output.
- 11) A laser light monitor as defined in claim 10, wherein
35 said visible light generator modulates an intensity of the visible light tracer.

- 12) A laser light monitor as defined in claim 10, wherein
said visible light generator modulates a color of the
visible light tracer.
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- 13) A laser light monitor as defined in claim 10, wherein
the predetermined non-visible laser light transmission
condition is a transition from absence of non-visible
laser light in the optical fiber to presence of non-
10 visible laser light in the optical fiber.
- 14) A laser light monitor as defined in claim 10, wherein
the predetermined non-visible laser light transmission
condition is a transition from a first power level of the
15 non-visible laser light to a second power level of the
non-visible laser light.
- 15) A laser light monitor as defined in claim 10
comprising a detector for sensing the non-visible laser
20 light in the optical fiber and generating an electrical
control signal, said detector including an output for
releasing the electrical control signal to said visible
light generator.
- 25 16) An optical fiber transmitting simultaneously a non-
visible laser light and a visible light tracer, wherein
the non-visible laser light includes Raman pump laser
light.
- 30 17) An optical transmission apparatus, comprising:
a) a port for conveying light, the light including non-
visible laser light and a visible light tracer;
b) a visible light generator for producing the visible
light tracer, said visible light generator being
35 optically coupled to said port for transmitting the
visible light tracer to said port;

